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| 10/753,388      | 01/09/2004  | Kang-Ping Lin        | MR2561-137          | 6089             |

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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
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3762

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/753,388

Applicant(s)

LIN ET AL.

Examiner

Michael Kahelin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/3/2006 has been entered.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

3. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Examiner was unable to find support for the limitation of the two gelless electrodes extending “through” the edge of the shell in the originally filed disclosure. Although Figures 2 and 3 show electrodes passing over an edge of the shell, Examiner was unable to find a description of electrodes extending through an edge.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-6 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear how electrodes can extend from an upper surface through an edge to the bottom surface of a shell. Further, “at least one edge of the shell” is inferentially included, rendering it unclear how this element relates to the other elements of the shell and whether it a positively claimed feature of the device. In regards to claim 21, the cover is lacking a structural relationship to the other elements of the claimed invention.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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11. Claims 13, 14, 21, and 22 are rejected under 35 U.S.C. 102(e) as anticipated by Mault et al. (US 6,790,178, hereinafter "Mault") or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mault in view of Au et al. (US 2002/0095093, hereinafter "Au").

12. In regards to claim 13, Mault discloses an ECG device (col. 13, line 56), and a device having a shell shaped as a long and thin cube (Fig. 13) with an operating panel (134, 136, 140, and 138), two gelless electrodes slightly embedded and fixed in the same surface (144 and 146), at least one information display (134), and a calculation system disposed in the shell and connected to the electrodes to calculate and display results (col. 14, line 51). Mault further discloses that the embodiments (such as the EKG monitor) apply to each of the disclosed monitors (such as the body fat monitor) (col. 6, line 27; and col. 24, line 48); inherently providing an EKG monitor with the electrode configuration shown in Figures 13 and 14.

13. Alternatively, Mault discloses the essential features of the claimed invention except for applying the two electrodes on the same surface to an EKG system. Au teaches of providing a system with two electrodes sharing the same surface to an EKG system (Fig. 3B) to enable patients to apply a simple gentle grip and have reliable skin-electrode contact for the acquisition of EKG to diagnose heart conditions. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Mault's system of two electrodes sharing the same surface to an EKG system to enable patients to apply a simple gentle grip and have reliable skin-electrode contact for the acquisition of EKG data to diagnose heart conditions.

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14. In regards to claim 14, Mault discloses an operating panel having at least one button to set and transfer functions (136).

15. In regards to claim 21, Mault's device further comprises a cover (Fig. 4, battery cover).

16. In regards to claim 22, Mault further discloses another two electrodes on the bottom surface of the device (148 and 150).

17. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mault (or Mault in view of Au). Mault (or Mault and Au) disclose the essential features of the claimed invention except for electrodes made of conductive metal or conductive rubber; displaying ST segment, QRS interval, and heart rate; or a calculation system comprising a pre-signal amplifier, electrocardio signal amplifying/filter circuit, A/D transfer circuit, and a CPU. It is well known in the art to provide ECG systems with electrodes made of conductive metal to provide signal continuity between the human body and electronic devices, conductive rubber to provide a flexible interface material that will maintain signal continuity on a moving body; displaying ST segment, QRS interval, and heart rate to determine heart health; and a calculation system comprising a pre-signal amplifier, electrocardio signal amplifying/filter circuit, A/D transfer circuit, and a CPU to allow the body's analog signals to be manipulated with easy-to-program digital systems. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mault's (or Mault in view of Au's) invention by providing an ECG system with electrodes made of conductive metal to provide signal

continuity between the human body and electronic devices, conductive rubber to provide a flexible interface material that will maintain signal continuity on a moving body; displaying ST segment, QRS interval, and heart rate to determine heart health; and a calculation system comprising a pre-signal amplifier, electrocardio signal amplifying/filter circuit, A/D transfer circuit, and a CPU to allow the body's analog signals to be manipulated with easy-to-program digital systems.

18. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mault in view of Au. Mault discloses the essential features of the claimed invention, as described above, except for electrodes that extend from a top surface to a bottom surface and through an edge of the shell. Au teaches of a handheld ECG device that (if the view shown in Fig. 3B is the "top view") comprises electrodes that extend from a top surface to a bottom surface (12) and through an edge of the shell to provide reliable electrode-skin contact with the patient (abstract). Please note that the electrodes (12) wrap around the round housing (10), meeting the limitation of "extending from the upper...to the bottom". Further, since the electrodes are connected to internal electronics, the electrodes extend "through" one edge of the shell to reach the internal cavity of 10. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Mault's invention with electrodes that extend from a top surface to a bottom surface and through an edge of the shell to provide reliable electrode-skin contact with the patient.



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19. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mault in view of Au. Mault's modified invention discloses the essential features of the claimed invention except for electrodes made of conductive metal or conductive rubber; displaying ST segment, QRS interval, and heart rate; or a calculation system comprising a pre-signal amplifier, electrocardio signal amplifying/filter circuit, A/D transfer circuit, and a CPU. It is well known in the art to provide ECG systems with electrodes made of conductive metal to provide signal continuity between the human body and electronic devices, conductive rubber to provide a flexible interface material that will maintain signal continuity on a moving body; displaying ST segment, QRS interval, and heart rate to determine heart health; and a calculation system comprising a pre-signal amplifier, electrocardio signal amplifying/filter circuit, A/D transfer circuit, and a CPU to allow the body's analog signals to be manipulated with easy-to-program digital systems. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Mault's invention by providing an ECG system with electrodes made of conductive metal to provide signal continuity between the human body and electronic devices, conductive rubber to provide a flexible interface material that will maintain signal continuity on a moving body; displaying ST segment, QRS interval, and heart rate to determine heart health; and a calculation system comprising a pre-signal amplifier, electrocardio signal amplifying/filter circuit, A/D transfer circuit, and a CPU to allow the body's analog signals to be manipulated with easy-to-program digital systems.

***Response to Arguments***

20. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Geddes et al. (US 4,606,352) is one of many teachings of providing an ECG device with a pre-signal amplifier, electrocardio signal amplifying/filter circuit, A/D transfer circuit, and a CPU; Birnbaum (US 5,464,021) is one of many teachings of providing an ECG device with conductive metal or rubber electrodes; and Unger (US 3,724,455) is one of many teaching of analyzing heart rate, ST segment, and QRS segment to determine heart function.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kahelin whose telephone number is (571) 272-8688. The examiner can normally be reached on M-F, 9-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MWK

  
11/21/06

  
GEORGE R. EVANISKO  
PRIMARY EXAMINER

11/20/6